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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/757,021 | 01/14/2004 | Soovo Sen | AMAT/8758/DSM/BCVD/JW | 3282 |
| 44257 | 7590 | 08/09/2006 | EXAMINER | |
| PATTERSON & SHERIDAN, LLP 3040 POST OAK BOULEVARD, SUITE 1500 HOUSTON, TX 77056 | | | LUND, JEFFRIE ROBERT | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1763 | |
| DATE MAILED: 08/09/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 10/757,021 | Applicant(s) SEN ET AL. | |
| | Examiner Jeffrie R. Lund | Art Unit 1763 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-5, 8-10, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sajoto et al, US Patent 6,527,865 B1, in view of Frijlink, WO 01/46498 A3.

Sajoto et al teaches a processing apparatus that includes a chamber body defining an interior processing region 20, a partially lined C-shaped pumping channel connected to a vacuum pump, a middle liner 28, a lower liner 21, and a gas distribution plate 26. Sajoto et al also teaches the use of a Teflon™ O-ring seal (polymer). (Figure 2, and column 5 lines 41-46)

Sajoto et al differs from the present invention in that Sajoto does not teach a pumping liner; or a C-channel liner comprising: a circumferential body portion, a circumferential upper arm, a lower arm, a channel portion defined by the upper arm, the lower arm, the body of the C-channel liner, and the body of the pumping liner an upper lip circumferentially disposed along the upper arm, the upper lip of the C-channel liner configured to interlock with the shoulder of the pumping liner body, and a lower shoulder along a radial portion of the lower arm, the lower shoulder of the C-channel liner configured to interlock with the lower lip of the pumping liner.

Frijlink teaches a process kit that includes: a pumping liner configured to be placed within the processing region of the processing chamber, the pumping liner comprising: a circumferential body 18, wherein the circumferential body has a plurality of pumping holes 12 disposed along the circumferential body, a shoulder circumferentially placed along an upper surface of the pumping liner body, and a lower lip disposed along a radial portion of a lower surface of the pumping liner body; a C-channel liner configured to be placed along an outer diameter of the pumping liner body within the processing region of the processing chamber, the C- channel liner comprising: a circumferential body 17, an upper arm 15, a lower arm 14, a channel portion defined by the upper arm, the lower arm, the body of the C-channel liner, and the body of the pumping liner, an upper lip circumferentially disposed along the upper arm, the upper lip of the C-channel liner configured to interlock with the shoulder of the pumping liner body, and a lower shoulder along a radial portion of the lower arm, the lower shoulder of the C-channel liner configured to interlock with the lower lip of the

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pumping liner and to also provide a pumping port liner opening; and a pumping port liner 29A in communication with the pumping port liner opening of the C-channel liner.

(Entire document, specifically, page 5 lines 16-32 and figure 5a)

The motivation for using the processing kit of Frijlink in the apparatus of Sajoto et al is to: completely line the C-shaped pumping channel of Sajoto et al to prevent deposition of bi-products on exposed surfaces of the gas manifold 46 or support ring 78 of Sajoto et al; simplify the construction of the middle shield ring and thus reduce the cost of the apparatus; and improve the uniformity of the gas flow in the processing chamber by equalizing the pressure gradient by replacing the open pumping slot of Sajoto et al with the pumping liner with holes 12 of Frijlink.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the pumping kit of Frijlink in the apparatus of Sajoto et al.

4. Claims 11, 12, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sajoto et al and Frijlink as applied to claims 1-5, and 8-10 above, and further in view of Sillmon et al, US Patent 6,666,920 B1.

Sajoto et al and Frijlink differ from the present invention in that they do not teach sealing the interface of the C-channel liner and pumping plate.

Sillmon et al teaches sealing the interface of a C-channel liner and a pumping plate. (Entire document)

The motivation for sealing the interface of the C-channel liner and pumping plate of Sajoto et al and Frijlink is to provide a gastight seal as taught by Sillmon et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time

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the invention was made to seal the interface of the C-channel liner and pumping plate of Sajoto et al and Frijlink as taught by Sillmon et al.

5. Claims 13-15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sajoto et al and Frijlink as applied to claims 1-5, and 8-10 above, and further in view Fairbairn et al, US Patent 5,911,834.

Sajoto et al and Frijlink differ from the present invention in that they do not teach a pair of processing regions connected by a polished aluminum pressure equalization port liner.

Fairbairn et al teaches a processing apparatus that includes a pair of processing regions 106 connected by a polished aluminum pressure equalization port liner 621. (Figures 19, and 21)

The motivation for adding a second processing region to the apparatus of Sajoto et al and Frijlink is to increase the throughput of Sajoto et al and Frijlink as taught by Fairbairn et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a second processing region to the apparatus of Sajoto et al and Frijlink as taught by Fairbairn et al.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sajoto et al, Frijlink, and Fairbairn et al as applied to claims 1-5, 8-10, 13-15, and 19 above, and further in view of Sillmon et al, US Patent 6,666,920 B1.

Sajoto et al, Frijlink and Fairbairn et al differ from the present invention in that they do not teach sealing the interface of the C-channel liner and pumping plate.

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Sillmon et al teaches sealing the interface of a C-channel liner and a pumping plate. (Entire document)

The motivation for sealing the interface of the C-channel liner and pumping plate of Sajoto et al, Frijlink and Fairbairn et al is to provide a gastight seal as taught by Sillmon et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to seal the interface of the C-channel liner and pumping plate of Sajoto et al, Frijlink and Fairbairn et al as taught by Sillmon et al.

Response to Arguments

7. Applicant's arguments with respect to claims 1-5 and 8-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

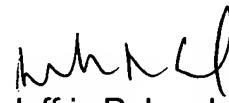
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
8/7/06